What is claimed is:

1. An ultrasonic flow sensor having
- at least one ultrasonic converter (A, B) for transmitting and receiving ultrasonic signals (A0, B0) and
- a receiver unit (4) that is connected to the ultrasonic converter (A, B), monitors when the ultrasonic signal (A0, B0) exceeds a predetermined threshold value (SW), and, depending on this event, determines a reception time (t_0) of the ultrasonic signal (A0, B0),

wherein the receiver unit (4) determines a piece of information about the amplitude (Amp) of the ultrasonic signal (A0, B0) and adapts the threshold value (SW) based on the information determined.

2. The ultrasonic flow sensor as recited in claim 1,
wherein the receiver unit (4) has a first S/H stage (12), whose input (US) is supplied with a converter output signal (5), and a subsequent second S/H stage (13), which adopts and stores the maximum value (Amp_{max}) of the first S/H stage (12).

3. The ultrasonic flow sensor as recited in claim 2,
wherein a voltage divider (14) is provided, which divides the output signal (20) of the second S/H stage (13), and a comparator (16) is provided, which is supplied with the partial voltage from the voltage divider (14).

4. The ultrasonic flow sensor as recited in one of the preceding claims,
wherein a low-pass filter (15) is provided, which filters the piece of information about the signal amplitude (Amp_{max}) or a piece of information (U_t) derived from it.

5. The ultrasonic flow sensor as recited in one of the preceding claims,
wherein the receiver unit (4) has a rectifier (21) that rectifies the converter output signal (5).

6. The ultrasonic flow sensor as recited in one of the preceding claims, wherein the receiver unit (4) has a differentiator (23), which is supplied with the converter output signal (5), and has a subsequent zero crossing detection unit (24).

7. A method for detecting the reception time (t_0) at which an ultrasonic signal (A0, B0) is received in an ultrasonic converter (A, B), using a receiver unit (4) that monitors when the ultrasonic signal (A0, B0) exceeds a predetermined threshold value (SW) and, depending on this event, determines a reception time (t_0) of the ultrasonic signal (A0, B0),
wherein the receiver unit (4) determines a piece of information about an amplitude (Amp) of the ultrasonic signal (A0, B0) and the threshold value (SW) is adapted as a function of the determined information (Amp) .

8. The method as recited in claim 7,
wherein a first S/H stage (12) stores the maximum amplitude value (Amp_{max}) of the ultrasonic signal (A0, B0) and a second S/H stage (13) scans and stores the maximum value (Amp_{max}) of the first S/H stage (12).

9. The method as recited in claim 7,
wherein the amplitude information (Amp, out) is obtained from the output signal (u_0, $u_{pi/2}$) of two lock-in amplifiers (41, 42; 41, 43).